



Department of Energy



MR. EDGAR BONDOC

Energy and Facilities Manager

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Hotel Supreme Convention Plaza

111 Magsaysay Avenue

Baguio City

Continental 
The Future in Motion

Integrated Safety –
Connect and Protect.

www.continental-automotive.com

Passive Safety & Sensorics





Continental's Energy Management System

April 24, 2018

www.continental-corporation.com

Chassis & Safety Division
Continental Temic Electronics (Phils.), Inc.
Plant Calamba



Title of the Presentation

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1. Energy Policy



All employees of Continental Corporation strive for sustainable production and pursue related ecological, economical and social targets. We are aware of the consequences for the environment and the climate resulting from the use of fossil-based raw materials for energy generation. Therefore we are committed to reduce our energy consumption and to improve our energy efficiency with a systematic and continuous improvement process.

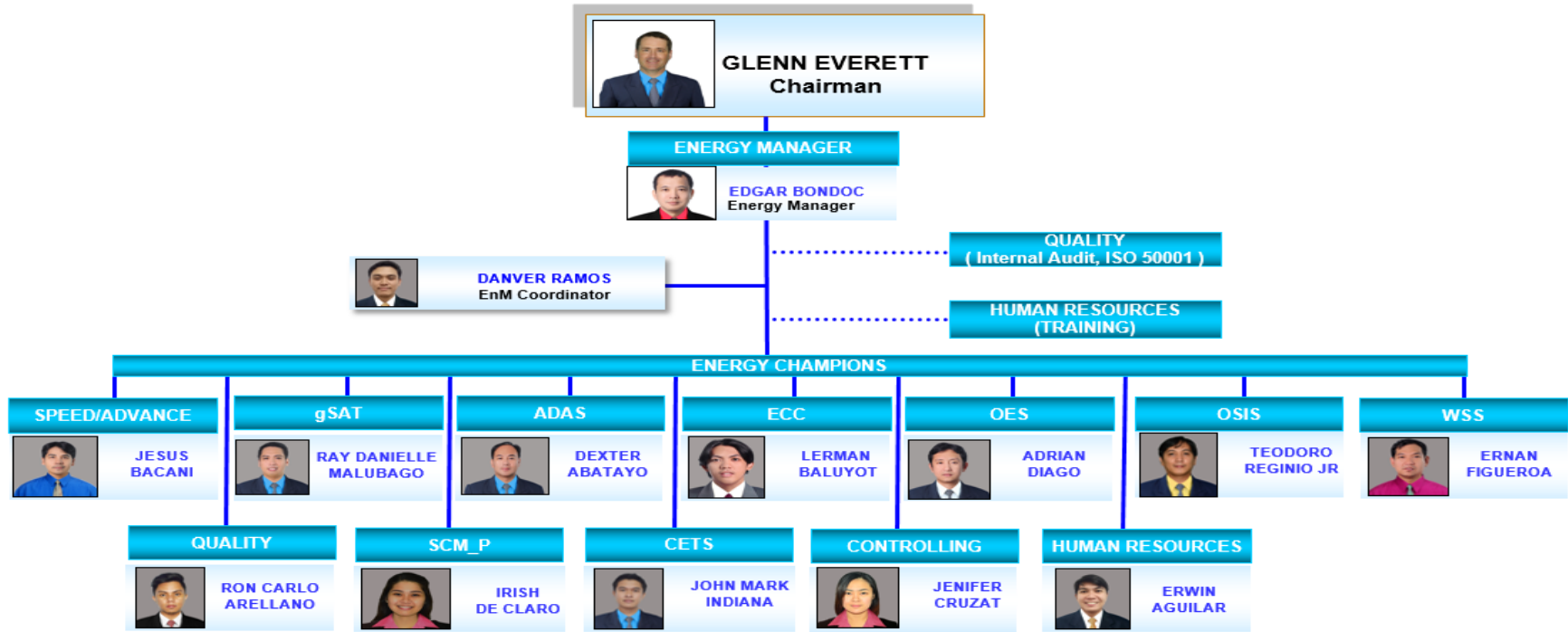


- > We fulfill all legal obligations and requirements.
- > We define responsibilities.
- > We train, inform and motivate our employees for an energy conscious behavior.
- > We include our contracted partners, suppliers and customers in our energy efficiency activities.
- > We regularly and systematically evaluate our energy efficiency, our use of energy and our energy consumption.
- > We generate the conditions to achieve our strategic and operative targets.
- > We undertake projects and programs to increase our energy efficiency.
- > We check, measure and assess our results by performing audits regularly and thereby we intend to continuously improve our system.

All persons working for our corporation are obliged to follow these standards and to actively participate to become "Best in Class" in Energy Efficiency.

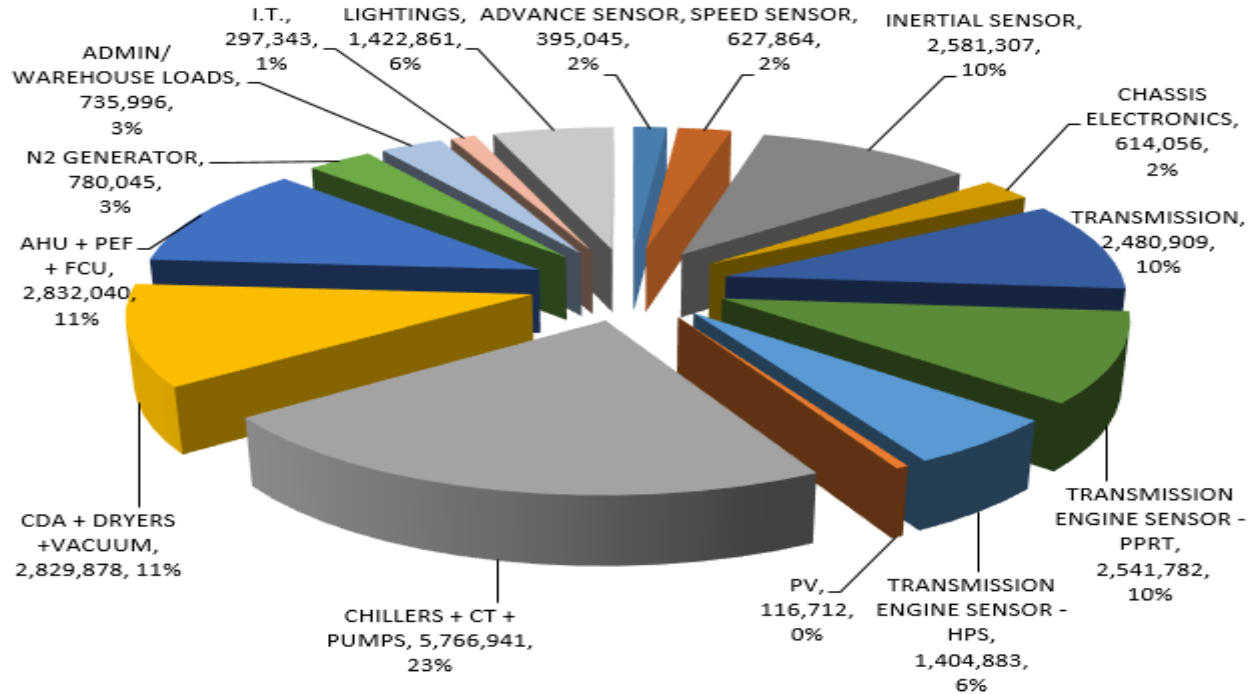


2. Energy Management Team - Plant Calamba







3. Energy Baseline Data Chart








4.1. Energy Efficiency Programs

| ITEM NO. | ENERCON PROGRAMS | ENERGY SAVINGS (kWh / Year) | AVOIDANCE OF CO2 (tons) | SUPPORTING PICTURES |
|----------|--|-----------------------------|-------------------------|---|
| 1 | Installation of FCU at MSS office, Clinic and Dentist room in order to turn-off AHU5A and AHU5B | 1,004,001 | 472 |  |
| | Installation of ducted type FCU at Matlab in order to turn-off AHU2-4. Turn-off Booster Fan 2C and replaced with FFU's | | | |
| 2 | Installation of FCU's in offices & meeting rooms. | 395,937 | 186 |  |
| 3 | Turning off AHU's & installation of FCU's at HR, Controlling & Training Rooms | 63,638 | 30 | |






4.2. Energy Efficiency Programs

| ITEM NO. | ENERCON PROGRAMS | ENERGY SAVINGS (kWh / Year) | AVOIDANCE OF CO2 (tons) | SUPPORTING PICTURES |
|----------|--|-----------------------------|-------------------------|---|
| 4 | Installation of VFD for Chilled Water Booster Pumps & Condenser Pumps | 407,633 | 192 |  |
| 5 | Shutting off of Chillers units during no production operation days | 1,935,179 | 910 |  |
| | Improve cooling water treatment to reduce condenser approach temperature to below 6 °C | | | |
| | Increase chilled water setting from 11 to 12 °C | | | |
| | Increase space temperature set point in air-conditioned areas from 21-24°C to 24-27°C | | | |
| 6 | Increase chilled water temperature set point from 9C to 11C | 61,756 | 29 |  |

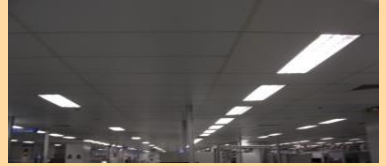




4.3. Energy Efficiency Programs

| ITEM NO. | ENERCON PROGRAMS | ENERGY SAVINGS (kWh / Year) | AVOIDANCE OF CO2 (tons) | SUPPORTING PICTURES |
|----------|---|-----------------------------|-------------------------|---|
| 7 | Vacuum cleaner of IPTE router is always ON. Automate control to turn on only when spindle is running or cutting. (1.5kva) | 48,116 | 23 |  |
| | Automate oven time controls, (Connector pre-bake oven – 10kva) | | |  |
| 8 | Installation of LED tubes at ADMIN/Common Area | 107,439 | 50 |  |






4.4. Energy Efficiency Programs

| ITEM NO. | ENERCON PROGRAMS | ENERGY SAVINGS (kWh / Year) | AVOIDANCE OF CO2 (tons) | SUPPORTING PICTURES |
|----------|---|-----------------------------|-------------------------|---|
| 9 | Replacement of Conventional Ballast to Electronic Ballast at Warehouse/ Facilities Area & Phase 1 & 2 production area | 121,773 | 57 |  |
| 10 | Replacement of emergency lights at production area except those on emergency exit doors with the existing ceiling lighting fixtures connected to UPS supply | 86,760 | 41 |  |
| 11 | Replacement of 215 pcs. 2 x 22W LED tubes into 9W LED bulb at Hallways | 242,378 | 114 |  |



4.5. Energy Efficiency Programs

| ITEM NO. | ENERCON PROGRAMS | ENERGY SAVINGS (kWh / Year) | AVOIDANCE OF CO2 (tons) | SUPPORTING PICTURES |
|----------|---|-----------------------------|-------------------------|---|
| 12 | Replacement of Fluorescent tubes to LED tubes (Building 2 and Ph1) | 270,768 | 127 |  |
| 13 | Replacement of 2,500 pcs. Existing 2 x 36 W fluorescent lamp into 2 x 16 W LED tubes @ Production areas of B2 & Phase 2 | 3,148,465 | 1,480 |  |
| 14 | Installation of 700kWp Solar PV System | 918,147 | 432 |  |

5. Strategic Planning




6. ISO 50001 Training



7. Energy Day & BEE Launching



Continental
The Future in Motion



Energy Campaign: BEE – Be Energy Efficient!

Energy is a valuable resource. With launching the “Energy Campaign” project the Automotive Divisions takes a decisive step towards increasing energy efficiency. Together...

- we aim at increasing the level of awareness for energy saving and its benefits for all employees, our organization and the environment.
- we promote and support technology driven improvement projects in our Automotive locations, to become “best in class in Energy Efficiency” and to increase our competitiveness.
- we support the energy management system to ensure we are continuously and systematically improving and we are consequently achieving sustainable results.
- we encourage an energy saving mindset, which will considerably contribute to reducing greenhouse gases and reducing costs both in production processes and in every individual’s household.

We commit to Energy Saving. Join us!


Glenn Everett
General Manager

| | | | |
|---|---------------------------------------|-----------------------------------|---|
| Mila Hernandez Senior Manager, Quality | Rosalie Isaac Senior Manager, LIPS | Ruby Guacra Senior Manager, HR | Susan Aranilla Senior Manager, Controlling |
| David Nadala Senior Manager, CE | Jorge Bedolla Senior Manager, PSS | Mario Roca Manager II, CIE | Reinhard Risger Senior Manager, TES |
| | | | Tonsten Misselwitz Senior Manager, ADAS |

Edgar Bondoc
Energy Manager

| | | | |
|--------------------------------|---|---|---|
| Norman Alguerto EnM Rep. HR | Anna Lorraine Rogales EnM Rep. LIPS/ENMS Coordinator | Ma Eloisa Tobias EnM Rep. Quality | Jennifer Cruzal EnM Rep. Controlling |
| Redmond Bitalag EnM Rep. CE | Dicksonson Asa EnM Rep. TES | Jesús Riponri EnM Rep. Advance/Speed | Von Ryan Mallari EnM Rep. ADAS |
| Ernan Figueroa EnM Rep. WSS | Gabriel Estrecho EnM Rep. Inerals | Steven Dimangalata EnM Rep. gSat | |

Stromer Automotive, July 2014



8. ISO 50001 Awarding







CERTIFICATE

This is to certify that

Continental Temic Electronics (Phils), Inc.
 16 Ring Road LISP2-SEZ
 Brgy. La Mesa, Calamba City 4027
 Laguna, Philippines

has implemented and maintains an **Energy Management System**.

Scope:
 Manufacturing of electro-mechanical and electronic parts and units for the automotive industry.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 50001 : 2011

| | |
|------------------------------|---------------|
| Certificate registration no. | 50500116 EMSI |
| Valid from | 2015-12-10 |
| Valid until | 2018-12-09 |
| Date of certification | 2015-12-10 |



Deutsche
 Akkreditierungsstelle
 D-ZM-30074-01-00

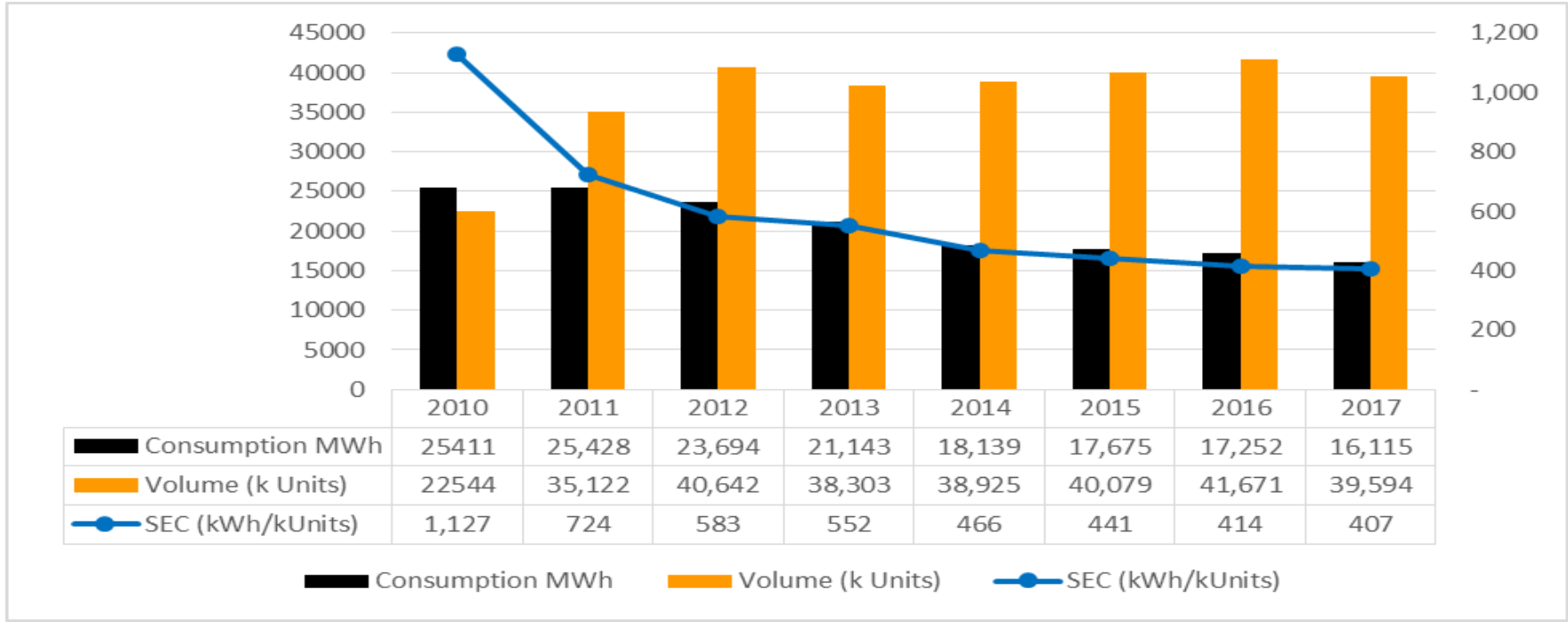
DQS GmbH
G. Blechschmidt
 Götz Blechschmidt
 Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main






9. Consumption & Specific Energy





Thank you
for your attention!

धन्यवाद

Mulpumesc

תודה

ευχαριστία

Tesekür ederim

Shukran

ლილი მადლობა

Kiitos

谢谢

DANKE

SALAMAT

TAKK

Dziękuję

Köszönöm

MERCI

THANK YOU

GRACIAS

どうもありがとう。

Dekuji

Ndia livhuwa

감사합니다

ΕΥΧΑΡΙΣΤΩ

Ngiyathokoza

MULTUMESC MULT

Hvala ti



April 24, 2018

Safe and Dynamic Driving towards Vision Zero



SensePlanAct